

- Electro Mechanical Systems Workshop (MEMS '97)*, held Jan. 26-30, 1997 in Nagoya, Japan, pp. 114-118 (1997).
- Brechtel et al., "Control of the electroosmotic flow by metal-salt-containing buffers," *J Chromatography A*, 716:97-105 (1995).
- Bryzek et al., "Micromachines on the march," *8045 IEEE Spectrum*, 31(5):20-31 (1994). XP 000456261.
- Buchaillet et al., "Silicon Nitride Thin Films Young's Modulus Determination by an Optical Non-Destructive Method," *Jpn. J. Appl. Phys.*, 36 Pt. 2(6B):L794-L797 (1997).
- Chiu et al., "Patterned deposition of cells and proteins onto surfaces by using three-dimensional microfluidic systems," *PNAS*, 97(6):2408-2413 (2000).
- Chou et al., "A microfabricated device for sizing and sorting DNA molecules," *PNAS*, 96:11-13 (1999).
- Delamarche et al., "Patterned Delivery of Immunoglobulins to Surface Using Microfluidic Networks," *Science*, 276:779-781 (1997).
- Duffy et al., "Rapid Prototyping of Microfluidic Systems in Poly(dimethylsiloxane)," *Analytical Chemistry*, 70(23):4974-4984 (1998).
- Duffy et al., "Rapid prototyping of microfluidic switches in poly(dimethyl siloxane) and their actuation by electro-osmotic flow," *J. Micromech. Microeng.*, 9:211-217 (1999).
- Duffy et al., "Patterning Electroluminescence Materials with Feature Sizes as Small as 5 μ m Using Elastomeric Membranes as Masks for Dry Lift-Off," *Advanced Materials*, 11(7):546-552 (1999). XP-000849014.
- Effenhauser et al., "Integrated capillary electrophoresis on flexible silicone microdevices: Analysis of DNA restriction fragments and detection of single DNA molecules on microchips," *Anal. Chem.*, 69:3451-3457 (1997).
- Effenhauser et al., "Integrated chip-based capillary electrophoresis," *Electrophoresis*, 18:2203-2213 (1997).
- Fahrenberg et al., "A microvalve system fabricated by thermoplastic molding," *J. Micromech. Microeng.*, 5:169-171 (1995).
- Fu et al., "A microfabricated fluorescence-activated cell sorter," *Nature Biotechnology*, 17:1109-1111 (1999).
- Goll et al., "Microvalves with bistable buckled polymer diaphragms," *J. Micromech. Microeng.*, 6:77-79 (1996).
- Graveson et al., "Microfluidics—a review," *J. Micromech. Microeng.* 3:168-182 (1993).
- Harrison et al., "Micromachining a miniaturized capillary electrophoresis-based chemical analysis system on a chip," *Science*, 261:895-897 (1993).
- Hornbeck et al., "Bistable Deformable Mirror Device," *Spatial Light Modulators and Applications 1988 Technical Digest Series*, vol. 8, Postconference Edition, Summaries of papers presented at the Spatial Light Modulators and Applications Topical Meeting, Jun. 15-17, 1988, Optical Society of America, pp. 107-110.
- Ikuta et al., "Three dimensional micro integrated fluid systems (MIFS) fabricated by stereo lithography," *IEEE Kyushu Institute of Technology*, pp. 1-6 (1994).
- Jacobson et al., "High-speed separations on a microchip," *Anal. Chem.*, 66(7):1114-1118 (1994).
- Jacobson et al., "Microfluidic devices for electrokinetically driven parallel and serial mixing," *Anal. Chem.*, 71(20):4455-4459 (1999).
- Jung et al., "Chemical and Physical Interactions at Metal/Self-Assembled Organic Monolayer Interfaces," *Crit. Rev. Solid State Material Sciences*, 19(1):2-10 (1994). XP000955639.
- Kenis et al., "Microfabrication inside capillaries using multiphase laminar flow patterning," *Science*, 285:83-85 (1999).
- Kopp et al., "Chemical Amplification: Continuous-Flow PCR on a Chip," *Science*, 280:1046-1048 (1998).
- Kuhn et al., "Silicon Charge Electrode Array for Ink Jet Printing," *IEEE Transactions on Electron Devices*, ED-25(10):1257-1260 (1978).
- Lin et al., "Free-space micromachined optical switches for optical networking," *IEEE J. Selected Topics in Quantum Electronics*, 5(1):4-9 (1999).
- Lötters et al., "The mechanical properties of the rubber elastic polymer polydimethylsiloxane for sensor applications," *J. Micromech. Microeng.*, 7:145-147 (1997).
- Lucy et al., "Characterization of the cationic surfactant induced reversal of electroosmotic flow in capillary electrophoresis," *Anal. Chem.*, 68:300-305 (1996).
- Maluf, N., *An Introduction to Microelectromechanical Systems Engineering*, Artech House Publishers, Boston London pp. 42-45.
- Markx et al., "Applications of dielectrophoresis in biotechnology," *Tibtech*, 15:426-432 (1997).
- Muller et al., "Surface-micromachined microoptical elements and systems," *Proceedings of IEEE*, 86(8):1705-1720 (1998).
- Qin et al., "Elastomeric Light Valves" *Advanced Materials*, 9(5):407-410 (1997). XP-000683891.
- Qin et al., "Photolithography with transparent reflective photomasks," *J. Vac. Science and Technology*, 16(1):98-103 (1998). XP00213356.
- Rapp, R., "LIGA micropump for gases and liquids," *Sensors and Actuators A*, 40:57-61 (1994).
- Roylance et al., "A Batch-Fabricated Silicon Accelerometer," *IEEE Transactions on Electron Devices*, ED-26(12):1911-1917 (1979).
- Schasfoort et al., "Field-effect flow control for microfabricated fluidic networks," *Science*, 286:942-945 (1999).
- Schueler et al., "Fabrication of glassy carbon microstructures by soft lithography," *Sensors and Actuators A*, 72(2):125-139 (1999). XP004155654.
- Shoji, S., "Fluids for Sensor Systems," *Topics in Current Chemistry*, 194:162-188 Springer Verlag Berlin Heidelberg (1998).
- Smits, J.G., "Piezoelectric Micropump with Three Valves Working Peristaltically," *Sensors and Actuators*, A21-A23:203-206 (1990).
- Tufte et al., "Silicon diffused-element piezoresistive diaphragms," *J. Appl. Phys.*, 33(11):3322-3327 (1962).
- Van der Pol et al., "Micro Liquid Handling Devices—A Review," *Micro Systems Technologies*, 90:799-805 (1990).
- Washizu et al., "Molecular dielectrophoresis of biopolymers," *IEEE Transactions on Industry Applications*, 30(4):835-843 (1994).
- Xia et al., "Complex optical surfaces formed by replica molding against elastomeric masters," *Science*, 273:347-349 (1996).
- Xia et al., "Soft Lithography," *Angew. Chem. Int. Ed.* 37:551-575 (1998).
- Xia et al., "Micromodeling of Polymers in Capillaries: Applications in Microfabrication," *Chemistry of Materials*, 8(7):1558-1567 (1996). XP000626885.
- Yang et al., "A MemS Thermopneumatic Silicone Membrane Valve," *Proceedings of IEEE 10th Annual International Workshop on MicroElectro Mechanical Systems, Sensors and Actuators*, A64(1):101-108 (1998).
- Yazdi et al., "Micromachined inertial sensors," *Proceedings of IEEE*, 86(8):1640-1659 (1998).
- Young et al., "Contoured elastic-membrane microvalves for microfluidic network integration," *J. Biomechanical Engineering*, 121:2-6 (1999).
- XP-002149046, Ullmann's Encyclopedia of industrial Chemistry, Sixth Edition, 1999 Electronic Release, 6 pages.
- Carter et al., Protein Crystallization Using Incomplete Factorial Experiments, the Journal of Biological Chemistry, 1979, pp. 12219-12223, vol. 254, No. 23.
- Carter et al., Statistical Design of Experiments for Protein Crystal Growth and the Use of a Precrystallization Assay, Journal of Crystal Growth 90, 1998, pp. 60-73.
- Jaramillo et al., Crystallization and Cryocrystallography inside X-ray capillaries, J. Appl. Cryst. (2001). 34, pp. 365-370.
- Kamholz et al., Quantitative Analysis of Molecular Interaction in a Microfluidic Channel: The T-Sensor, Analytical Chemistry, vol. 71, No. 23, Dec. 1, 1999, pp. 5340-5347.
- Lin et al., Convective-diffusive transport in protein crystal growth, Journal of Crystal Growth, 151 (1995), pp. 153-162.
- Luft et al., Kinetic Aspects of Macromolecular Crystallization, Methods in Enzymology, 1997, pp. 110-130, vol. 276.
- Miller et al., A Comparison between Protein Crystals Grown with Vapor Diffusion Methods in Microgravity and Protein Crystals using a Gel Liquid-liquid diffusion Ground-Based Method, Journal of Crystal Growth 132 (1992), pp. 306-309.
- Nerd et al., Ground-Based Experiments on the Minimization of Convention During the Growth of Crystals From Solution, Journal of Crystal Growth, 1986, pp. 591-608, vol. 75.

- Ruiz et al., Agarose as Crystallization Media for Proteins I: Transport Processes, *Journal of Crystal Growth*, 2001, pp. 165-172, vol. 232.
- Ruiz et al., Investigations on Protein Crystal Growth by the Gel Acupuncture Method, *Acta Crystallographica*, 1994, pp. 484-490, Section D.
- Salemme, A Free Interface Diffusion Technique for the Crystallization of Proteins for X-Ray Crystallography, *Archives of Biochemistry and Biophysics*, 1972, pp. 533-539, vol. 151.
- Thomas et al., Distribution coefficients of Protein Impurities in Ferritin and Lysozyme Crystals Self-Purification in Microgravity, *Journal of Crystal Growth* 211 (2000), pp. 149-156.
- Andersson et al., Consecutive Microcontact Printing—Ligands for Asymmetric Catalysis in Silicon Channel, *Sensors and Actuators, B*, 1997, 2001, pp. 1-7.
- Chayen, The Role of Oil in Macromolecular Crystallization, *Structure*, 1997, vol. 5, No. 10, pp. 1269-1274.
- Ducruix et al., Methods of Crystallization in Crystallization of Nucleic Acids and Proteins—A Practical Approach, IRL Press, Oxford, 1992; : 73-98.
- McPherson, Crystallization of Macromolecules: General Principles, *Methods Enzymol.*, 1985, pp. 114, 112.
- McPherson et al., Crystallization of Proteins by Variations of pH of Temperature, *Methods Enzymol.*, 1985; 114: pp. 125-127.
- McPherson et al., Use of Polyethylene Glycol in the Crystallization of Macromolecules, *Methods Enzymol.*, 1985; 114: pp. 120-125.
- Phillips, Crystallization in Capillary Tubes, *Methods Enzymol.* 1985; 114: pp. 128-131.
- Wu et al., MEMS Flow Sensors for Nano-Fluidic Applications, *Sensors and Actuators A* 89, 2001, pp. 152-158.
- "Biochips," *Nature Biotechnology*, vol. 18, Supplement 2000, pp. IT43-IT44, 2000.
- "Chapter 9: Microfluidic Devices," *Micromachined Transducers Sourcebook*, pp. 779-882, 1998.
- "Electro Microfluidic Dual In-Line Package (EMDIP)," Sandia National Laboratories, 2 pages, no date.
- Anderson, Rolfe C. et al., "Microfluidic Biochemical Analysis System," *Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators*, Chicago, Illinois, pp. 477-480, Jun. 16-19, 1997.
- Angell, James B. et al., "Silicon Micromechanical Devices," *Scientific American*, pp. cover, 44-45, Apr. 1983.
- Armani, Deniz et al., "Re-Configurable Fluid Circuits By PDMS Elastomer Micromachining," *IEEE Int. Conf. Micro Electro Mech. Syst. Tech. Digest*, vol. 12, pp. 222-227, 1999.
- Ballantyne, J. P. et al., "Selective Area Metallization By Electron-Beam Controlled Direct Metallic Deposition," *J. Vac. Sci. Technol.*, vol. 10, No. 6, pp. 1094-1097, Nov. 1973.
- Bloomstein, T. M. et al., "Laser-Chemical Three-Dimensional Writing For Microelectromechanics And Application To Standard-Cell Microfluidics," *J. Vac. Sci. Technol. B*, vol. 10, No. 6, pp. 2671-2674, Nov. 1992.
- Bousse, Luc et al., "Electrokinetically Controlled Microfluidic Analysis Systems," *Annu. Rev. Biophys. Biomol. Struct.*, vol. 29, pp. 155-181, 2000.
- Chou, Hou-Pu et al., "Integrated Elastomer Fluidic Lab-On-A-Chip-Surface Patterning And DNA Diagnostics," *Proceedings of the Solid State Actuator and Sensor Workshop*, Hilton Head, South Carolina, 4 pages, 2000.
- Chou, Hou-Pu et al., "Multiple Disease Diagnostics On A Single Chip," *Biophysics Lab, Caltech*, pp. 1-4, Mar. 1, 2000.
- Fetting, J. C. et al., "Stacked Modules For Micro Flow Systems In Chemical Analysis: Concept And Studies Using An Enlarged Model," *Sensors and Actuators B*, vol. 17, pp. 19-25, 1993.
- Folch, A. et al., "Molding Of Deep Polydimethylsiloxane Microstructures For Microfluidics And Biological Applications," *Journal of Biomechanical Engineering*, vol. 121, pp. 28-34, Feb. 1999.
- Galambos, Paul et al., "Electrical And Fluidic Packaging Of Surface Micromachined Electro-Microfluidic Devices," 8 pages, no date.
- Greene, Chana, "Characterizing The Properties Of PDMS," pp. 1-11, Summer 2000.
- Guérin, L. J. et al., "Simple And Low Cost Fabrication Of Embedded Micro-Channels By Using A New Thick-Film Photoplastic," *Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators*, Chicago, Illinois, pp. 1419-1422, Jun. 18-19, 1997.
- Hicks, Jennifer, "Genetics And Drug Discovery Dominate Microarray Research," *R&D Magazine*, pp. 28-33, Feb. 1999.
- Jo, Byung-Ho et al., "Fabrication Of Three-Dimensional Microfluidic Systems By Stacking Molded Polydimethylsiloxane (PDMS) Layers" *SPIE*, vol. 3877, pp. 222-229, Sep. 1999.
- Jo, Byung-Ho et al., "Three-Dimensional Micro-Channel Fabrication In Polydimethylsiloxane (PDMS) Elastomer," *Journal of Microelectromechanical Systems*, vol. 9, No. 1, pp. 76-81, Mar. 2000.
- Kagan, C. R., "Organic-Inorganic Hybrid Materials As Semiconducting Channels In Thin-Film Field-Effect Transistors," *Science*, vol. 286, pp. 945-947, Oct. 29, 1999.
- Kapur, Ravi et al., "Fabrication And Selective Surface Modification Of 3-Dimensionally Textured Biomedical Polymers From Etched Silicon Substrates," *Journal of Biomedical Materials Research*, vol. 33, pp. 205-216, 1996.
- Khoo, Melvin et al., "A Novel Micromachined Magnetic Membrane Microfluid Pump," pp. 1-4, no date.
- Kim, Enoch et al., "Polymer Microstructures Formed By Moulding In Capillaries," *Nature*, vol. 376, pp. 581-584, Aug. 17, 1995.
- Kirk-Othmer, "Concise Encyclopedia of Chemical Technology," John Wiley & Sons, 5 pages, no date.
- Kumar, Amit et al., "Features Of Gold Having Micrometer To Centimeter Dimensions Can Be Formed Through A Combination Of Stamping With An Elastomeric Stampe And An Alkanethiol 'Ink' Followed By Chemical Etching," *Appl. Phys. Lett.*, vol. 63, No. 14, pp. 2002-2004, Oct. 4, 1993.
- Kumar, Amit et al., "Patterning Self-Assembled Monolayers: Applications In Materials Science," *Langmuir*, vol. 10, pp. 1498-1511, 1994.
- Lagally, Eric T. et al., "Monolithic Integrated Microfluidic DNA Amplification And Capillary Electrophoresis Analysis System," *Sensors and Actuators B*, vol. 63, pp. 138-146, 2000.
- Lammerink, T. S. J. et al., "Modular Concept For Fluid Handling Systems," *IEEE*, pp. 389-394, 1996.
- Li, Paul C. H. et al., "Transport, Manipulation, And Reaction Of Biological Cells On-Chip Using Electrokinetic Effects," *Analytical Chemistry*, vol. 69, No. 8, pp. 1564-1568, Apr. 15, 1997.
- Licklider, Larry et al., "A Micromachined Chip-Based Electrospray Source For Mass Spectrometry," *Analytical Chemistry*, vol. 72, No. 2, pp. 367-375, Jan. 15, 2000.
- Manz, A. et al., "Micromachining Of Monocrystalline Silicon And Glass For Chemical Analysis Systems," *Trends in Analytical Chemistry*, vol. 10, No. 5, pp. 144-149, 1991.
- Marshall, Sid, "Fundamental Changes Ahead For Lab Instrumentation," *R&D Magazine*, 5 pages, Feb. 1999.
- Marsili, Ray, "Lab-On-A-Chip Poised To Revolutionize Sample Prep," *R&D Magazine*, 5 pages, Feb. 1999.
- McDonald, J. Cooper et al., "Fabrication Of Microfluidic Systems In Poly(dimethylsiloxane)," *Electrophoresis*, vol. 21, pp. 27-40, 2000.
- Oleschuk, Richard D. et al., "Analytical Microdevices For Mass Spectrometry," *Trends In Analytical Chemistry*, vol. 19, No. 6, pp. 379-388, 2000.
- Sanjoh, Akira et al., "Spatiotemporal Protein Crystal Growth Studies Using Microfluidic Silicon Devices," *Journal of Crystal Growth*, vol. 196, pp. 691-702, 1999.
- Thompson, L. F. et al., "Introduction To Microlithography," 185th Meeting of the American Chemical Society, Seattle, WA, pp. 2 cover pages, 1-13, Mar. 20-25, 1983.
- Van Den Berg, A. et al., "Micro Total Analysis Systems," *Proceedings of the μ TAS '94 Workshop*, University of Twente, The Netherlands, 17 pages, Nov. 21-22, 1994.
- Verpoorte, Elisabeth M. J. et al., "Three-Dimensional Micro Flow Manifolds For Miniaturized Chemical Analysis Systems," *J. Micromech. Microeng.*, vol. 7, pp. 246-256, 1994.
- Wilbur, James L. et al., "Lithographic Molding: A Convenient Route To Structures With Sub-Micrometer Dimensions," *Adv. Mater.*, vol. 7, No. 7, pp. 649-652, 1995.